



Claims

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1-21 (Cancelled)

22. (Cancelled)

23. (Amended) A process according to claim ~~22~~42, characterised in that the hydrolyzable compounds of claim 42 are compounds of the type $M(O-R-A-R^1)_{z-n}(O-R'')_n$, wherein independent from each other

M is an aluminium or silicon,

R'' is a hydrocarbon residue having 1 to 30 carbon atoms,

R' is a hydrocarbon residue having 1 to 10 carbon atoms,

R is a bivalent hydrocarbon residue having 1 to 10 carbon atoms, and

A represents a heteroatom of the main group 6 (oxygen group) or the main group 5 (nitrogen group) of the periodic system wherein, if A represents an element of the main group 5, A bears hydrogen or a C₁ to C₁₀ alkyl residue or a C₆ to C₁₀ aryl/alkyl aryl residue as additional substituents for the saturation of its valences, and

n is an index for the numbers 0, 1, 2, or 3 if M is aluminum, or is an index for the numbers 0, 1, 2, 3, or 4 if M is silicon, and

z is an index for the number 3 if M is aluminum, or is an index for the number 4 if M is silicon.

24. **(Original)** A process according to claim 23, characterized in that n is equal to 0.

25. **(Original)** A process according to claim 23, characterised in that n is equal to 3 if M is aluminum and/or n is equal to 4, if M is silicon.

26. **(Amended)** A process according to any one of claims ~~22~~42, 23 or 25, characterised in that silicon alcoholates having C₁ to C₈ hydrocarbon residues are used as hydrolyzable silicon compounds.

27. **(Amended)** A process according to any one of claims ~~22~~42, 23 or 25, characterised in that prior to addition of the hydrolyzable aluminum compound, the hydrolyzable silicon compound is prehydrolyzed with water or dilute acid using 0.5 to 3 moles of water per mole of silicon, namely, less than the stiochiometric amount.

28. **(Amended)** A process according to any one of claims ~~22~~42, 23 or 25, characterized in that aluminum alcoholates having C₂ to C₁₂ hydrocarbon residues are used as hydrolyzable aluminum compounds.

29. **(Amended)** A process according to any one of Claims ~~22~~42, 23 or 25, characterised in that the hydrolysis is performed at 50 to 98°C.

30. **(Amended)** A process according to any one of claims ~~22~~42, 23 or 25, characterised in that the hydrothermal ageing is conducted for a period of 0.5 hour to 24 hours.

31. **(Amended)** A process according to any one of claims ~~22~~42, 23 or 25, characterised in that the acid is added after the hydrolysis and prior to hydrothermal treatment.

32. **(Amended)** A process according to any one of claims ~~22~~42, 23 or 25, characterised in that the acid which is present during or after the hydrolysis is a monovalent organic C₁ to C₆ acid or a monovalent mineral acid.

33. **(Amended)** A process according to any one of claims ~~22~~42, 23 or 25, characterised in that the hydrolyzable metal compounds are purified prior to use by distillation, filtration, or centrifugation and/or are liberated from metal ions by ion exchange.

34. **(Amended)** A process according to any one of claims ~~22~~42, 23 or 25, characterised in that the reaction product of the invention is calcined at temperatures of from 550°C and 1500°C for a period of 0.5 hour to 24 hours.

35. **(Cancelled)**

36. **(Original)** A process according to claim 28 wherein the aluminum alcoholates have from C₄ to C₈ hydrocarbon residues.

37. **(Original)** A process according to claim 28 wherein the aluminium alcoholates have saturated C₆ to C₈ hydrocarbon residues.

38. **(Original)** A process according to claim 29 wherein the hydrolysis is performed at a temperature of from 85 to 90°C.

39. **(Original)** A process according to claim 30 wherein the hydrothermal aging is conducted for a period of from 1 to 20 hours.

40. **(Original)** A process according to claim 26 wherein the silicon alcoholates have C₂ to C₄ hydrocarbon residues.

41. **(Original)** A process according to claim 26 wherein the hydrocarbon residues are saturated.

42. **(New)** A process for the production of an aqueous/aqueous-acidic dispersion of an alumino-silicate comprising:

hydrolyzing jointly or separately from each other in space or time at least one hydrolyzable aluminum compound and at least one hydrolyzable organosilicon compound, at a

temperature of from 50 to 98°C, wherein the aluminum compound/silicon compound ratio is from 99.5 wt. % : 0.5 wt. % to 50 wt. %: 50 wt. %, each referring to $\text{Al}_2\text{O}_3:\text{SiO}_2$;

during or after the hydrolysis subjecting the hydrolysis reaction products to hydrothermal aging in an aqueous/aqueous-acidic media at a temperature of from 80 to 220°C for a period of time greater than 0.5 hour.

recovering a dry powder of the aged alumino-silicate; and

dispersing the alumino-silicate powder in an aqueous/aqueous-acidic media is an amount of greater than 90% wt. without the addition of or treatment with any organic solvent.